培養細胞該選擇哪一種培養表面？

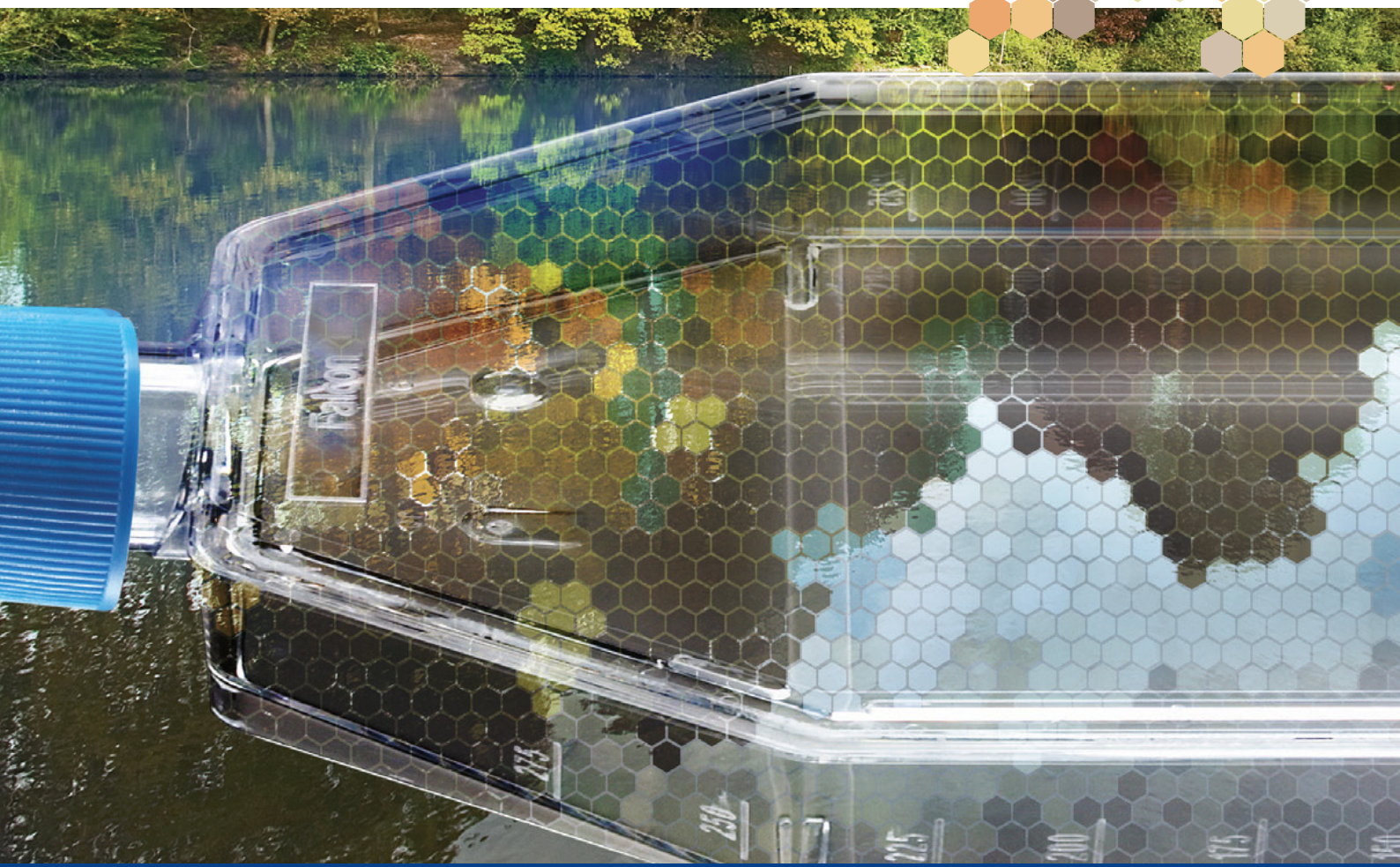
The right surface — right from the start

CORNING

# BioCoat
# 細胞培養表面選擇指南

提供各種細胞對應曾經發表過文獻的細胞培養表面，
以及相應 ready to use 的各式培養耗材

**大幅提高您的實驗效率**



## Primary Cells

| | Size | Collagen I | Collagen IV | Matrigel® Matrix | Fibronectin | Gelatin |
|---|---|---|---|---|---|---|
| **CultureSlides** | 8 well | ○ | | | ○ | |
| | 4 well | ○ | | | ○ | |
| | 2 well | ○ | | | ○ | |
| | 1 well | ○ | | | ○ | |
| **Coverslips** | 35mm (Coverslip-Bottom Dish) | | | | | |
| | 22 mm | ○ | | | ○ | |
| | 12 mm | | | | | |
| **Multiwell plates** | 96 well | ○ | ○ | ○ | ○ | ○ |
| | 48 well | ○ | | ○ | ○ | |
| | 24 well | ○ | ○ | ○ | ○ | |
| | 12 well | ○ | | ○ | ○ | |
| | 6 well | ○ | ○ | ○ | ○ | ○ |
| **Flasks** | Multi-3-layer | | | | | |
| | Multi-5-layer | | | | | |
| | 300 $cm^2$ | | | | | |
| | 225 $cm^2$ | | | | | |
| | 175 $cm^2$ | ○ | ○ | | ○ | |
| | 150 $cm^2$ | ○ | | | ○ | |
| | 75 $cm^2$ | ○ | ○ | | ○ | ○ |
| | 25 $cm^2$ | ○ | ○ | | ○ | |
| | 12.5 $cm^2$ | | | | | |
| **Dishes** | 150 mm | ○ | ○ | | ○ | |
| | 100 mm | ○ | ○ | ○ | ○ | ○ |
| | 60 mm | ○ | ○ | ○ | ○ | |
| | 35 mm | ○ | ○ | ○ | ○ | |

| Primary Cells | Extracellular Matrices (ECMs) and Biological Coatings | | | | |
|---|---|---|---|---|---|
| Aortic endothelial cells, BAEC | 1 | | 2, 3 | 4 | |
| Bile duct cells (epithelial) | 6 | | 7 | | |
| Bone marrow cells (bone resorption, osteoclast) | | | | | |
| Brain microvessel (endothelial) | 11, 12 | 12 | 13 | 12 | 14 |
| Cardiomyocytes; cardiac (endothelium, progenitor cells) | 15 | | 16 | 17 | |
| Colonocytes (epithelial) | | 23 | 24 | | |
| Dorsal root ganglia | | | 26, 27 | | |
| Embryonic cortical neurons | | | 30 | | |
| Embryonic sympathetic neurons | | 32 | 33 | | |
| Endothelial cells; endothelial colony forming cells | | 34 | | 34, 35 | |
| Erythrocyte culture (parasite development stages [asexual, sexual]) | | | 379 | | |
| Hepatocytes | 38, 386, 387 | 39, 387 | 40, 387 | | |
| Hippocampal neurons | | | 46, 47 | 48 | |
| Human periodontium (periodontal ligament) | | | | | |
| Human osteoclast precursors (osteoclast, pit formation) | | | | | |
| HUVEC (endothelial) | 55, 56 | | 57, 58 | 56, 59-61 | 62 |
| HVSMC | | | 58 | | |
| Keratinocytes | 66, 67 | | 67 | 67, 68 | |
| Mammary epithelial cells; breast cells (luminal, myoepithelial and endothelial) | 70, 71, 73 | | 71, 72 | | |
| Microvascular, BME (endothelial) | 76 | 77 | 78 | 79, 80 | 76, 81 |
| Mouse splenic T-cells | | 84 | 84 | | |
| Muscle cells, myoblasts, myogenic cells, myotubes | | | 85 | | |
| euronal cells (cortical, cerebeller granule, astrocytes, sensory, sympathetic) | | 88 | | | |
| Oligodendrocytes (glial; precursors) | | | 101 | | |
| Osteoblasts | 104 | | | | |
| Pancreatic islet, neonatal (3- to 5-day-old) rat islets of langerhans | | | 107 | 106 | |
| Parotid acinar cells | | | 110 | | |
| Peripheral blood mononuclear cells | 111, 112 | 113 | 114 | 112-114 | |
| Postnatal mouse vestibular ganglion neurons | | | | | |
| Schwann cells (glial) | | 118 | 118 | | |
| Sertoli cells (spermogenic) | | | 121, 122 | | |
| Skeletal muscle cells (myocytes, myotubes) | | | 123 | | |
| Smooth muscle cells (endothelial, aortic, vascular) | 126 | 126 | 127 | 126, 128 | |
| Urothelial cells | 130 | 130 | 131 | 132 | |
| Valvular interstitial cells | | | | 133 | |
| Zygote and blastocyst development stages | | | | | |

| Laminin | Poly-Lysine (PDL, PLL) | PDL/LM and PLO/LM | PureCoat™ ECM Mimetic Fn | PureCoat ECM Mimetic COL I | rLaminin-521 (Human) | Primaria™ | PureCoat Amine | PureCoat Carboxyl |
|---|---|---|---|---|---|---|---|---|
| | ○ | ○ | | | | | | |
| | ○ | | | | | | | |
| | ○ | ○ | | | | | | |
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| ○ | ○ | ○ | ○ | ○ | | ○ | ○ | ○ |
| ○ | ○ | | | | | | | |
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | ○ | ○ | ○ | | | |
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| ○ | ○ | | | | | ○ | | |
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| ○ | ○ | | | | | | | |
| ○ | ○ | ○ | | | | ○ | ○ | ○ |
| ○ | ○ | | | | | ○ | | |
| ○ | ○ | | | | | ○ | | |
| | | | ECM Mimetics and Advanced Surfaces | | | Enhanced TC-treated Surfaces | | |
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| 387 | 41 | | | | | 43, 44 | | |
| 46, 48 | 46, 49, 50 | 49, 50 | | | | | | |
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## Cell Lines (transformed or transfected)

| | Size | Collagen I | Collagen IV | Matrigel® Matrix | Fibronectin | Gelatin |
|---|---|---|---|---|---|---|
| **CultureSlides** | 8 well | ○ | | | ○ | |
| | 4 well | ○ | | | ○ | |
| | 2 well | ○ | | | ○ | |
| | 1 well | ○ | | | ○ | |
| **Coverslips** | 35mm (Coverslip-Bottom Dish) | | | | | |
| | 22 mm | ○ | | | ○ | |
| | 12 mm | | | | | |
| **Multiwell plates** | 96 well | ○ | ○ | ○ | ○ | ○ |
| | 48 well | ○ | | ○ | ○ | |
| | 24 well | ○ | ○ | ○ | ○ | |
| | 12 well | ○ | | ○ | ○ | |
| | 6 well | ○ | ○ | ○ | ○ | ○ |
| **Flasks** | Multi-3-layer | | | | | |
| | Multi-5-layer | | | | | |
| | 300 $cm^2$ | | | | | |
| | 225 $cm^2$ | | | | | |
| | 175 $cm^2$ | ○ | ○ | | ○ | |
| | 150 $cm^2$ | ○ | | | ○ | |
| | 75 $cm^2$ | ○ | ○ | | ○ | ○ |
| | 25 $cm^2$ | ○ | ○ | | ○ | |
| | 12.5 $cm^2$ | | | | | |
| **Dishes** | 150 mm | ○ | ○ | | ○ | |
| | 100 mm | ○ | ○ | ○ | ○ | ○ |
| | 60 mm | ○ | ○ | ○ | ○ | |
| | 35 mm | ○ | ○ | ○ | ○ | |

| Cell Lines (transformed or transfected) | Extracellular Matrices (ECMs) and Biological Coatings | | | | |
|---|---|---|---|---|---|
| ARH-77 (lymphoblast) | | | | 255 | |
| BHK-21 (fibroblast) | | | | 61 | 256 |
| Breast cancer cells (established cell lines) | | | 261, 262 | | |
| C2C12 (myoblast) | 263 | | 264 | | |
| Cell immobilization (Gin-1, Nasal epithelial cells, Molt-4 and K562 human leukemia cells, Sf9 Cells) | | | | | |
| Chinook Salmon Embryo Cells (CHSE-214) | | | | | |
| CHO, CHO-1, CHO-K1 (epithelial, endothelial, transfected fusion protein) | | | 272, 273 | | 274 |
| COS-7 (fibroblast, transfected) | 279 | | 280 | 279 | |
| Dorsal Root Ganglia (transfected) | | | 284 | | |
| H1299 (transfected- human non-small cell lung carcinoma cell line) | | | 286 | 287 | |
| HEK-293 (transfected, epithelial), EcoPack2™-293, HEK-SRAtet cells, Living Colors HEK-ZsGreen proteasome sensor (transfected) | 289, 290 | | 291 | | 291 |
| HeLa | | | | | |
| HepG2 (hepatocyte), Hep3B (hepatoma) | 299 | | 300 | | |
| HT-1080 (epithelial) | 302, 303 | 304, 305 | 302 | | |
| hFOB 1.19, MG63 (osteoblast cell lines) | | | 309-311 | 312 | |
| Human MOLT-4, drosophila S2 (biomaterial and tissue engineering applications) | | | | | |
| Keratinocytes (human neonatal) | 315 | | | 316 | |
| L929 (fibroblast, transfected) | | | 317 | | |
| LnCAP (prostate cancer cell line) | 307 | | 320 | | |
| MCF7 (epithelial) | 321 | 322 | | 323 | |
| MCF-10A (epithelial) | 71, 325 | | 71, 325-328 | 329, 330 | |
| MDA-MB-231 | 302, 307, 334 | 322 | 302, 326, 335-339 | 322, 334 | 322 |
| MDA-MB 435 | 340 | | 338, 339, 341, 342 | | |
| MM41 (skeletal myoblasts, transfected) | 344 | | | | |
| MRC5 | | | | | |
| N2AB-1 (neuroblastoma) | | | | | |
| NIH/3T3, 3T3 (fibroblast) | | | 345 | 346, 347 | |
| PC-3, PC-12 | 307, 350 | | 351, 390 | | |
| RTG-2 (rainbow trout gonad cells) | | | 358 | | |
| RAW 264.7 (macrophage; osteoclast differentiation, pit formation) | | 359 | | | |
| SH-SY5Y | 362 | 362 | 363 | | |
| SK-MEL-28 | | 366 | | 366, 367 | |
| U266 (lymphoblast) | | | | 255 | |
| U937 (monocyte) | 368 | | | | |
| Vero cells | | | | | |

| Laminin | Poly-Lysine (PDL, PLL) | PDL/LM and PLO/LM | PureCoat™ ECM Mimetic Fn | PureCoat ECM Mimetic COL I | rLaminin-521 (Human) | Primaria™ | PureCoat Amine | PureCoat Carboxyl |
|---|---|---|---|---|---|---|---|---|
| | ○ | ○ | | | | | | |
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| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
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| ○ | ○ | ○ | | | | ○ | ○ | ○ |
| ○ | ○ | | | | | ○ | | |
| ○ | ○ | | | | | ○ | | |
| | | | ECM Mimetics and Advanced Surfaces | | | Enhanced TC-treated Surfaces | | |
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| | 281, 282 | | | | | 283 | | |
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| | 274, 292 | | | | | 294 | 258, 297 | 297 |
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| 352 | 348, 353, 354 | 355 | | | | 356 | 22 | 22 |
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| 364 | | 364 | | | | | | |
| 366 | | | | | | | | |
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| 369 | | | | | | | | |
| | | | 275 | 275 | | | | |

## Stem and Progenitor Cell Expansion

| | Size | Collagen I | Collagen IV | Matrigel® Matrix | Fibronectin | Gelatin | Laminin |
|---|---|---|---|---|---|---|---|
| **CultureSlides** | 8 well | ○ | | | ○ | | |
| | 4 well | ○ | | | ○ | | |
| | 2 well | ○ | | | ○ | | |
| | 1 well | ○ | | | ○ | | |
| **Coverslips** | 35mm (Coverslip-Bottom Dish) | | | | | | |
| | 22 mm | ○ | | | ○ | | |
| | 12 mm | | | | | | |
| **Multiwell plates** | 96 well | ○ | ○ | ○ | ○ | ○ | ○ |
| | 48 well | ○ | | ○ | ○ | | ○ |
| | 24 well | ○ | ○ | ○ | ○ | | ○ |
| | 12 well | ○ | | ○ | ○ | | ○ |
| | 6 well | ○ | ○ | ○ | ○ | ○ | ○ |
| **Flasks** | Multi-3-layer | | | | | | |
| | Multi-5-layer | | | | | | |
| | 300 $cm^2$ | | | | | | |
| | 225 $cm^2$ | | | | | | |
| | 175 $cm^2$ | ○ | ○ | | ○ | | |
| | 150 $cm^2$ | ○ | | | ○ | | |
| | 75 $cm^2$ | ○ | ○ | | ○ | ○ | ○ |
| | 25 $cm^2$ | ○ | ○ | | ○ | | ○ |
| | 12.5 $cm^2$ | | | | | | |
| **Dishes** | 150 mm | ○ | ○ | | ○ | | ○ |
| | 100 mm | ○ | ○ | ○ | ○ | ○ | ○ |
| | 60 mm | ○ | ○ | ○ | ○ | | ○ |
| | 35 mm | ○ | ○ | ○ | ○ | | ○ |

| Stem and Progenitor Cells Expansion | Extracellular Matrices (ECMs) and Biological Coatings | | | | | |
|---|---|---|---|---|---|---|
| Human embryonic stem cell (hESC) | | 134 | 135 | 134 | | 134 |
| Human induced pluripotent stem cell (hiPSC) | | | 138, 139 | | | |
| hMSCs (bone marrow derived, adipose derived) | | | | 140 | | |
| Human retinal progenitor cells (RPE) | | | | 143 | | |
| rESC; rat endothelial progenitor cells | | | | | 144 | |
| Neuronal stem cell (intestinal/enteric) | | | | 147 | | 147 |

| Poly-Lysine (PDL, PLL) | PDL/LM and PLO/LM | PureCoat™ ECM Mimetic Fn | PureCoat ECM Mimetic COL I | rLaminin-521 (Human) | Primaria™ | PureCoat Amine | PureCoat Carboxyl |
|---|---|---|---|---|---|---|---|
| ○ | ○ | | | | | | |
| ○ | | | | | | | |
| ○ | ○ | | | | | | |
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| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
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| | | ECM Mimetics and Advanced Surfaces | | | Enhanced TC-treated Surfaces | | |
| | | | | 392 | | | |
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| | | 141 | | | | | |
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## *In Vitro* Differentiation of Pluripotent Stem Cells

| | Size | Collagen I | Collagen IV | Matrigel® Matrix | Fibronectin | Gelatin |
|---|---|---|---|---|---|---|
| **CultureSlides** | 8 well | ○ | | | ○ | |
| | 4 well | ○ | | | ○ | |
| | 2 well | ○ | | | ○ | |
| | 1 well | ○ | | | ○ | |
| **Coverslips** | 35mm (Coverslip-Bottom Dish) | | | | | |
| | 22 mm | ○ | | | ○ | |
| | 12 mm | | | | | |
| **Multiwell plates** | 96 well | ○ | ○ | ○ | ○ | ○ |
| | 48 well | ○ | | ○ | ○ | |
| | 24 well | ○ | ○ | ○ | ○ | |
| | 12 well | ○ | | ○ | ○ | |
| | 6 well | ○ | ○ | ○ | ○ | ○ |
| **Flasks** | Multi-3-layer | | | | | |
| | Multi-5-layer | | | | | |
| | 300 $cm^2$ | | | | | |
| | 225 $cm^2$ | | | | | |
| | 175 $cm^2$ | ○ | ○ | | ○ | |
| | 150 $cm^2$ | ○ | | | ○ | |
| | 75 $cm^2$ | ○ | ○ | | ○ | ○ |
| | 25 $cm^2$ | ○ | ○ | | ○ | |
| | 12.5 $cm^2$ | | | | | |
| **Dishes** | 150 mm | ○ | ○ | | ○ | |
| | 100 mm | ○ | ○ | ○ | ○ | ○ |
| | 60 mm | ○ | ○ | ○ | ○ | |
| | 35 mm | ○ | ○ | ○ | ○ | |

| *In Vitro* Differentiation of Pluripotent Stem Cells | Extracellular Matrices (ECMs) and Biological Coatings | | | | |
|---|---|---|---|---|---|
| hESC (cerebral organoid model) | | | 148 | | |
| hESC (pancreatic) | | | 149 | | 150 |
| hESC, hiPSC (cardiomyocytes) | | | 149, 151-153 | | 154 |
| hESC, hiPSC, mESC (Germ Cell Layers: ectoderm, mesoderm, endoderm; hematopoietic progenitor; definitive differentiation; cardiomyocytes) | 155, 228 | 156 | 135, 138, 139, 158, 159 | 157 | 160 |
| hESC, hiPSC, mESC, miPSC (endothelial) | 165 | | 164, 166,167 | | |
| hESC, hiPSC (intestinal organoids) | | | 168, 169 | | |
| hESC, hiPSC (neuronal) | | | 149, 170,171 | 170 | |
| hESC (osteogenic) | | | | | 177 |
| hESC, hiPSC (smooth muscle) | | | 170, 178 | 170 | |
| hESC, mESC (lung epithelial) | 179 | | 179, 180 | | 182 |
| hESC, mESC, rESC (hepatocyte, hepatocyte-like) | 183 | | 170, 183-186 | 170 | 187 |
| Human NPCs (differentiation to neuronal cells) | | | 188 | | |
| hPSCs, mPSCs (renal progenitor cells, renal tubular cells, endoderm) | 155 | | 191, 192 | | |
| mESC (hematopoietic) | | | 164 | | |
| mESC, Chicken (cardiomyocytes) | 165, 193 | | 193 | 165 | 154, 194, 195 |
| mESC, rESC, miPSC(neuronal, progenitor) | | | 188 | 188, 196 | 197, 198 |
| mPSCs (inner ear sensory epithelia) | | | 201 | | |
| hESC, hiPSC (retinal pigment epithelial) | | | 396 | | |

| Laminin | Poly-Lysine (PDL, PLL) | PDL/LM and PLO/LM | PureCoat™ ECM Mimetic Fn | PureCoat ECM Mimetic COL I | rLaminin-521 (Human) | Primaria™ | PureCoat Amine | PureCoat Carboxyl |
|---|---|---|---|---|---|---|---|---|
| | ○ | ○ | | | | | | |
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| | | | ECM Mimetics and Advanced Surfaces | | | Enhanced TC-treated Surfaces | | |
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| 161, 162 | | | | | 393 | | | |
| 164 | | | | | | | | |
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| 170, 172 | 170 | 173 | | | 393 | | | |
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| 170 | 170 | | | | | | | |
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| 170 | 170 | | | | | | | |
| 189 | | | | | 393 | | | |
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| 165 | | | | | | | | |
| 188, 199 | 200 | | | | | | | |
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## *In Vitro* Differentiation of Adult Stem Cells

| | Size | Collagen I | Collagen IV | Matrigel® Matrix | Fibronectin | Gelatin | Laminin |
|---|---|---|---|---|---|---|---|
| CultureSlides | 8 well | ○ | | | ○ | | |
| | 4 well | ○ | | | ○ | | |
| | 2 well | ○ | | | ○ | | |
| | 1 well | ○ | | | ○ | | |
| Coverslips | 35mm (Coverslip-Bottom Dish) | | | | | | |
| | 22 mm | ○ | | | ○ | | |
| | 12 mm | | | | | | |
| Multiwell plates | 96 well | ○ | ○ | ○ | ○ | ○ | ○ |
| | 48 well | ○ | | ○ | ○ | | ○ |
| | 24 well | ○ | ○ | ○ | ○ | | ○ |
| | 12 well | ○ | | ○ | ○ | | ○ |
| | 6 well | ○ | ○ | ○ | ○ | ○ | ○ |
| Flasks | Multi-3-layer | | | | | | |
| | Multi-5-layer | | | | | | |
| | 300 cm2 | | | | | | |
| | 225 cm2 | | | | | | |
| | 175 cm2 | ○ | ○ | | ○ | | |
| | 150 cm2 | ○ | | | ○ | | |
| | 75 cm2 | ○ | ○ | | ○ | ○ | ○ |
| | 25 cm2 | ○ | ○ | | ○ | | ○ |
| | 12.5 cm2 | | | | | | |
| Dishes | 150 mm | ○ | ○ | | ○ | | ○ |
| | 100 mm | ○ | ○ | ○ | ○ | ○ | ○ |
| | 60 mm | ○ | ○ | ○ | ○ | | ○ |
| | 35 mm | ○ | ○ | ○ | ○ | | ○ |

| *In Vitro* Differentiation of Adult Stem Cells | Extracellular Matrices (ECMs) and Biological Coatings | | | | | |
|---|---|---|---|---|---|---|
| hADSCs; adipose (endothelial) | | | 202 | | | |
| Cardiac progenitor cells (cardiomyocyte) | 204 | | | | | 205 |
| Colon (epithelial organoids) | 207 | | 169, 208 | | | |
| Hair follicle (melanocytes, neurons, smooth muscle) | | | 210 | 210 | | |
| Hepatic progenitor cells (hepatic, bilary cells) | | | | | | 211 |
| Intestinal (organoids, crypt-villus) | 213 | | 214-216 | | | |
| Keratinocytes (epidermal) | 217 | | | | 217 | |
| Lung (sphere) | | | 218 | | | |
| Mammary epithelial cells | | | 220-222 | | | |
| MSC (cardiomyocyte, chondrocyte, hematopoetic, hepatocyte, neuron, osteocyte, spheroid) | 141, 223-227, 232 | | 223, 225, 229, 230 | 140, 223-225, 229, 231 | | 223,224 |
| MSC (endothelial progenitors) | 240 | | | | | |
| Muscle (skeletal) | | | | | | 241 |
| Neural progenitor/stem cells (neuron, astrocytes, neuroblast) | | | 243 | | 198 | 189, 243 |
| Pancreatic (endocrine) | | 249 | 248, 250 | | | 249 |
| Prenatal rat cells (neuron, glial cells) | | | | | | 251 |
| Retinal (retinal neuron) | | | | | | |
| Salivary gland | | | 253 | | | |
| Stomach (gastric units) | | | 254 | | | |

| Poly-Lysine (PDL, PLL) | PDL/LM and PLO/LM | PureCoat™ ECM Mimetic Fn | PureCoat ECM Mimetic COL I | rLaminin-521 (Human) | Primaria™ | PureCoat Amine | PureCoat Carboxyl |
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| | | ECM Mimetics and Advanced Surfaces | | | Enhanced TC-treated Surfaces | | |
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| 204 | | | | | | | |
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